To: Cote, Ila[Cote.lla@epa.gov]

From: Vandenberg, John

Sent: Tue 2/28/2017 12:50:33 PM

Subject: RE: NAS Causal Model workshop March 6-7.

Tox 21 PDF4 Jan 2017.pdf

Tox21-Exp21 Presentation Jan 2017.ppt

Here you go. Surprised myself by finding this so quickly!

From: Cote, Ila

Sent: Monday, February 27, 2017 11:09 PM

To: Vandenberg, John < Vandenberg. John@epa.gov> **Subject:** Re: NAS Causal Model workshop March 6-7.

Did u get my note about misplacing the NAS document that u sent me. The one u suggested I reference pertaining to MOAs. Can u resend? I cannot figure out where I filed it.

Ila Cote, PhD

Senior Science Advisor

National Center for Environmental Assessment

Office of Research and Development

202-288-9539

On Feb 27, 2017, at 12:01 PM, Vandenberg, John < <u>Vandenberg, John@epa.gov</u>> wrote:

FYI – I'm sure you'd find this interesting.

From: Vandenberg, John

Sent: Monday, February 27, 2017 2:01 PM

To: Sasser, Erika <<u>Sasser.Erika@epa.gov</u>>; Scavo, Kimber <<u>Scavo.Kimber@epa.gov</u>>;

Dutton, Steven <<u>Dutton.Steven@epa.gov</u>>; Rimer, Kelly <<u>Rimer.Kelly@epa.gov</u>>; Wesson, Karen <<u>Wesson.Karen@epa.gov</u>>; Jarabek, Annie <<u>Jarabek.Annie@epa.gov</u>>; Hetes, Bob <<u>Hetes.Bob@epa.gov</u>>; Sams, Reeder <<u>Sams.Reeder@epa.gov</u>>; Hotchkiss, Andrew <Hotchkiss.Andrew@epa.gov>

Subject: NAS Causal Model workshop March 6-7.

FYI – next week there is a meeting of the NAS on causal models.

I'm an EPA representative to the Emerging Science committee and plan to attend in person (there is committee meeting after the workshop). It will be webcast.

Join a workshop on March 6-7, 2017, hosted by the Standing Committee on Emerging Science for Environmental Health Decisions, to discuss the current thinking surrounding causal models, how novel approaches and tools are relevant for environmental health, and how they can be incorporated into the decision making process. Held in Washington, DC and webcast, this free, 2-day workshop will bring together leading environmental health experts, toxicologists, statisticians, sociologists, epidemiologists, regulators and experts from other fields that utilize different data streams for establishing causality in complex systems.

http://nas-sites.org/emergingscience/

http://nas-sites.org/emergingscience/files/2017/02/Causal-Understanding-Agenda-05.pdf

DESCRIPTION

Advances in molecular and bioinformatic approaches have enhanced our ability to understand how molecular pathways are affected by exposure, leading to a better understanding of the networks involved in disease outcomes. However, when it comes to establishing causality and performing risk assessment at the population level, these advances in understanding the molecular networks are not yet deemed as sufficient evidence for decision making. The use of animal models are still required to establish causality for regulatory decisions, despite the simultaneous push to reduce our reliance on such methods. This situation has generated a lot of questions in the field, such as: How do

we determine causality using other types of data when animal data are limited or absent? Does new 21st century environmental health pathway-based thinking require new thinking about how to determine which molecular events or intermediate events should be the basis of safety concerns? To what degree do molecular events of concern (e.g., oxidative stress) need to be tied to traditional apical endpoints that regulators typically use to make decisions? What is the role of dose in predictive thinking vs. empirical observation in animals? How do we think about multicausality, where there are multiple pathways or networks determining how a disease will manifest in humans and animals?

On March 6-7, 2017, the Standing Committee on Emerging Science for Environmental Health Decisions will convene a 2-day workshop to explore these questions. This workshop will bring together environmental health experts, toxicologists, statisticians, sociologists, epidemiologists, regulators, and experts from other fields. At this workshop, participants will discuss the current thinking surrounding causal models, bring in experts from other fields that utilize different data streams for establishing causality in complex systems, and further explore methods for evaluating multi-causality and incorporating molecular data. Workshop participants will also discuss how these novel approaches and tools are relevant for environmental health and how they can be incorporated into the decision making process.

----Original Appointment----

From: Sasser, Erika

Sent: Wednesday, May 18, 2016 7:49 AM

To: Sasser, Erika; Vandenberg, John; Scavo, Kimber; Dutton, Steven; Rimer, Kelly; Wesson, Karen; Jarabek, Annie; Hetes, Bob; Sams, Reeder; Hotchkiss, Andrew

Subject: Sasser/Vandenberg - re: NAAQS Coordination with NCEA/HEID - Rm. C501A

Call-In No. (919) 541-4407

When: Tuesday, February 28, 2017 4:00 PM-5:00 PM (UTC-05:00) Eastern Time (US &

Canada).

Where: RTP-OAQPS-C501A/RTP-OAQPS-BLDG-C